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### Remarks

Claims 1, 16, 17, 22 and 24-29 were pending in the above-captioned application, with claims 7 and 10-15 withdrawn due to a restriction requirement. Claim 24 has been amended, claims 30-34 added and claims 1, 16, 17, 22 and 29 canceled herein in order to more clearly define and fully protect Applicants' invention. Reconsideration and allowance of all claims 24-28 and 30-34 is believed appropriate and is respectfully requested.

Applicants gratefully acknowledge the interview held October 4, 2005 between Examiner Vargot, Robert A. Mercuri and the undersigned, at which time the amendments made herein were discussed in view of the cited prior art.

Currently, all claims stand rejected under 35 U.S.C. §102(b) over German Offenleg 2147938 ("Sigri"), alone or in view of Shane et al. (U.S. 3,404,061), or 35 U.S.C. §103(a) over Sigri in view of Shane et al. or Tzeng (U.S. 6,482,520). As discussed during the interview, however, the amendments made herein clearly distinguish the invention of the pending claims over these references.

More particularly, independent claim 24 has been amended to specify that the thermal solution produced in the claimed process has an in-plane thermal conductivity of at least about 450 W/m°C and a thermal anisotropic ratio of at least about 160 (support for which appears in the specification at page 13). Given that

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Sigri does not disclose any thermal properties for the graphite material produced in accordance with the reference (which is a brush material for electric machines, for which thermal properties are not expected to be important), Sigri does not disclose calendering the laminate once it is formed to so align the graphene particles of the laminate such that the noted thermal particles are produced (claim 26), and Shane et al. does not teach or suggest that a graphite articles having an in-plane thermal conductivity of at least about 450 W/m°C or a thermal anisotropic ratio of at least about 160 are even feasible, the invention of claim 24 and the claims depending therefrom are patentably distinguished from the references.

Likewise, newly added independent claim 30 specifies that the claimed process can produce a thermal solution which has a through-plane thermal conductivity of at least about 2 W/m°C and a thermal anisotropic ratio of at least about 160 (support for which also appears in the specification at page 13). As noted above, Sigri does not disclose any thermal properties for the graphite material produced in accordance with the reference (which is a brush material for electric machines, for which thermal properties are not expected to be important), and does not disclose calendering the laminate once it is formed to so align the graphene particles of the laminate such that the noted thermal particles are produced (claim 26). Moreover, Shane et al. does not teach or suggest that a graphite article having a through-plane thermal conductivity of at least about 2 W/m°C or a thermal anisotropic ratio of at least about 160 is even feasible. Indeed, Shane et al. teaches

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that the through-plane conductivity of a graphite article will be lower than  $2 \text{ W/m}^\circ\text{C}$  when the anisotropic ratio is substantial. Thus, the invention of claim 30 and the claims depending therefrom are patentably distinguished from the references.

Accordingly, each of the rejections of the pending claims of the above-captioned application should be passed to allowance.

### CONCLUSION

Based on the foregoing amendments and remarks, it is believed that all pending claims 24-28 and 30-34 are in condition for allowance. Entry of this amendment and allowance of all pending claims is, therefore, respectfully requested. If there remains any matter which prevents the allowance of any of these claims, the Examiner is requested to call the undersigned, collect, at 615.242.2400 to arrange for an interview which may expedite prosecution.

Applicants hereby petition the Commissioner for a three month extension of time under 37 C.F.R. §1.136(a), extending the time for filing this response to November 3, 2005. The Commissioner is authorized to charge the extension fee of \$1020, as well as any deficiency associated with the filing of this Response, to Deposit Account No. 50-1202.

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Respectfully submitted,



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